

BPA gives old energy efficiency technology a second look

Local News

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Portland, OR - The Bonneville Power Administration wants to know if 25-year-old technology can be updated and improved to provide significant electricity savings in the Pacific Northwest. The agency is partnering with the Electric Power Research Institute and 11 regional utilities as part of a national pilot project for heat pump water heaters. To understand the concept of heat pumps, imagine a refrigerator working in reverse. While a refrigerator removes heat from an enclosed box and expels that heat into the surrounding air, a heat pump water heater takes the heat from surrounding air and transfers it to an enclosed tank to heat the water and then vents the cold exhaust air from the unit. While this results in some great cooling side benefits in hotter regions of the country, these field tests will determine their effectiveness in cold climates and their savings potential in the Pacific Northwest for this technology.

“This is a unique opportunity to research a tried and true technology that works in other parts of the country to see if we can realize significant savings in our neck of the woods,” BPA Residential Sector Lead Sarah Fielding Moore said. “In addition, this demonstration project is a chance to work with our partners at the NW Energy Efficiency Alliance and major manufacturers to see if there are potential changes to the products that would improve performance and success in our cooler climate.”



About 40 percent of homes in the Pacific Northwest have electric water heaters. Considering that water heating accounts for 15 to 20 percent of electric energy use in these homes, substantial savings could be achieved if the water heaters were more efficient. New heat pump water heaters have an energy-savings potential of 50 percent or more. The Northwest Power and Conservation Council's Sixth Power Plan calls for eight average megawatts of savings by replacing about 33,000 electric water heaters with heat pump water heaters within the next five years. The electricity savings would provide enough power for nearly 7,000 homes for a year. BPA selected 11 public utilities to participate in the field test involving 40 single-family homes around the region. It's part of a national test involving 160 homes. The projects will determine if the units provide energy efficiency in a real-life setting and how the family feels about the units operating in their homes. In addition, BPA is conducting lab tests to help provide data in a more controlled environment. Installation of the water heaters and metering equipment is currently underway, which is perfect timing for national [Energy Awareness Month](#). Testing will be complete by December 2011. Utilities participating in the pilot project include the following:

- City of Ashland, located in southern Oregon
- City of Bonners Ferry, located in northern Idaho
- Clark Public Utilities, located in southwestern Washington
- Eugene Water & Electric Board, located in western Oregon
- Hood River Electric Cooperative, located in northern Oregon
- McMinnville Water and Light, located in northwestern Oregon
- Missoula Electric Cooperative, located in western Montana
- Ravalli Electric Cooperative, located in western Montana
- Snohomish Public Utility District, located in Washington's Puget Sound
- Springfield Utility Board, located in western Oregon
- Wahkiakum Public Utility District, located in southwestern Washington